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A Summary of Current Programs 9/30/66  
and Preliminary Report of Progress  
for 10/1/65 to 9/30/66

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FOREIGN REGIONAL ANALYSIS DIVISION  
of the  
ECONOMIC RESEARCH SERVICE  
UNITED STATES DEPARTMENT OF AGRICULTURE  
and related work of the  
STATE AGRICULTURAL EXPERIMENT STATIONS

This progress report is primarily a tool for use of scientists and administrators in program coordination, development and evaluation; and for use of advisory committees in program review and development of recommendations for future research programs.

The summaries of research progress include a brief description of the work performed by foreign research institutions under direction of the Division with Section 104(a) of Title I, P.L. 480 funds, and contractual work performed for the Division by Land-Grant Universities and other institutions or persons.

The summaries of progress on U.S.D.A. and research-contractor activities include some tentative results that cannot be confirmed until the research has further progressed. Such findings, when adequately confirmed will be released promptly through established channels. Because of this, the report is not intended for publication and should not be referred to in literature citations. Copies are distributed only to members of Department staff, advisory committee members and others having a special interest in the development of public agricultural research programs.

This report also includes a list of publications reporting results of U.S.D.A. and cooperative research issued between October 1, 1965 and September 30, 1966. This progress report was compiled in the Foreign Regional Analysis Division, Economic Research Service, U.S. Department of Agriculture, Washington, D.C. 20250.

UNITED STATES DEPARTMENT OF AGRICULTURE

Washington, D.C.

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## INTRODUCTION

The Foreign Regional Analysis Division is one of two research divisions of the Economic Research Service which works in the foreign field. Its function, through basic and applied research, is to analyze effects of world, regional, and country developments and trends in agricultural production, consumption, and trade to disclose opportunities for developing new markets and maintaining and expanding existing markets for U.S. farm products.

The research and service work of the Division involves a Washington staff of 56 economists (research scientists) plus 7 supervisors. The members of this staff perform economic and statistical analysis work in Washington, travel abroad and gather data not available through other channels, and plan, negotiate, and direct the execution of research contracts.

During the past year there was a realignment of the Division organizational structure and the research areas. This was in part a result of the 1964-65 Economic Research Service Advisory Committee's recommendation that the Division assign highest priority to work on the long-range outlook for U.S. farm products. The West European Branch and the East European Branch were merged into a Europe and Soviet Union Branch. Within each of the four regional branches three research groups were established to allow specialization to facilitate delegation of responsibility at the project level. These research groups are: (a) Situation and Outlook, (b) Demand and Competition, (c) Long-Range Outlook. The Europe and Soviet Union Branch has an additional research group--Communist Areas Analysis.

The areas of research were realigned as follows:

Area I -- Current Situation and Short-Run Outlook.

This includes part of the work formerly called Area II (Foreign Competition and Demand by Country and Region) and all of the work formerly called Area III (Quantitative Evaluation of Foreign Production, Utilization of Farm Products).

Area II -- Demand for and Competition with U.S. Agricultural Exports.

This is the rest of the work formerly called Area II, but this research has been strengthened to provide better analysis of demand and competition with emphasis on developments affecting the U.S. share of foreign agricultural markets.

Area III -- Long-Range Outlook for U.S. Agricultural Exports.

This was formerly Area I. This was strengthened by adding an economist (GS-15) to the World Analysis Group and doubling the economists in this research area in the branches.

The Foreign Regional Analysis Division is reimbursed for research work done for the Central Intelligence Agency and the Agency for International Development. For CIA the Division annually prepares eight major monographs on the agricultural resources, production, consumption, trade and institutions of selected countries. Six economists and one supervisor are engaged in this activity. They are included in the Division total. This research is not included above in the three research areas of the Division.

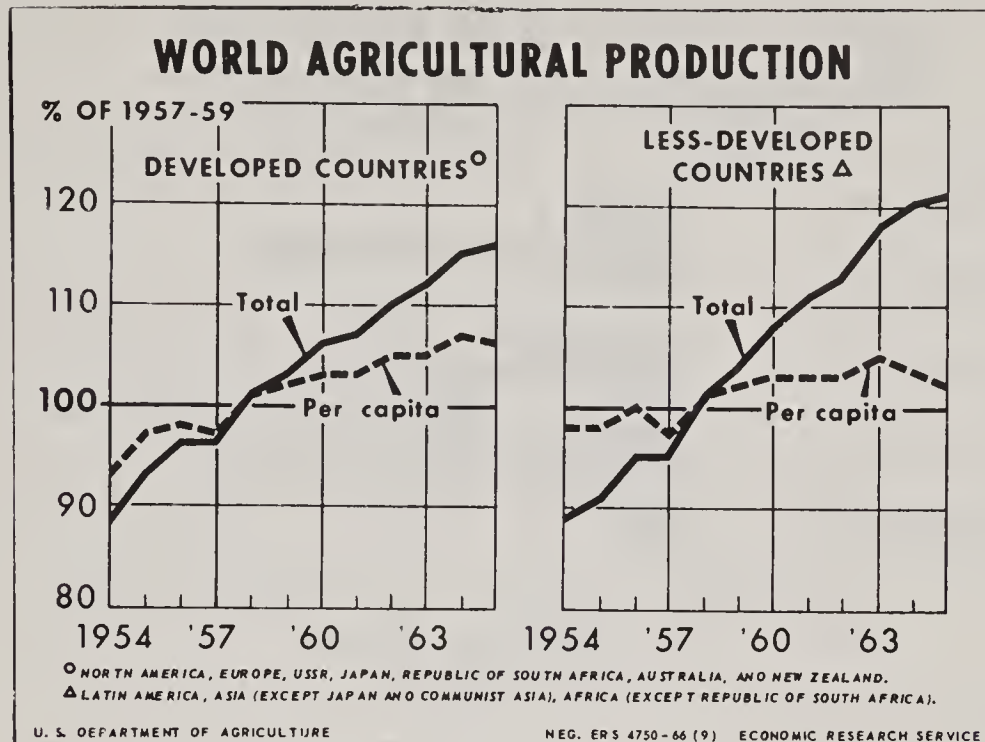
For AID the Division annually prepares index numbers of production for the less-developed countries of the world and renders certain technical and consultative services in support of the technical assistance and training programs. The Division is also involved in a Participating Agency Service Agreement with AID to conduct research on the demand for export products of the less-developed countries. The economists involved in these activities are included in the Division total and the research is included in the three research areas of the Division.

There is close cooperation between the Foreign Regional Analysis Division and the Foreign Development and Trade Division, and between the Division and the Foreign Agricultural Service to preclude duplication or overlapping of work. The work of the FRA involves the making of analyses by country or commodity while that of FDT involves the analysis of a given problem regardless of country or commodity. The work of FRA involves long-term analyses in greater depth than studies carried out in FAS for current operational purposes.

In addition to its own resources, the FRAD utilizes market development funds of Section 104(a), Title I, P.L. 480, administered by FAS, to contract with Land-Grant Universities and other economic and marketing organizations to perform research on market potential in countries and regions. Some P.L. 480 funds are advanced by FAS to cover travel abroad in servicing these contracts.

As a step toward implementation of the recommendations for a National Program of Research for Agriculture made jointly by the Association of State Universities and Land-Grant Colleges and the USDA, a section has been added to each of the Areas in this report. It comprises a list of the related publications of the State Agricultural Experiment Stations in addition to those heretofore reported covering the results of USDA and cooperative research. In future years, it is anticipated that information will be available to permit reporting of achievements resulting from State research in a format comparable to the present reporting of the USDA and cooperative research.

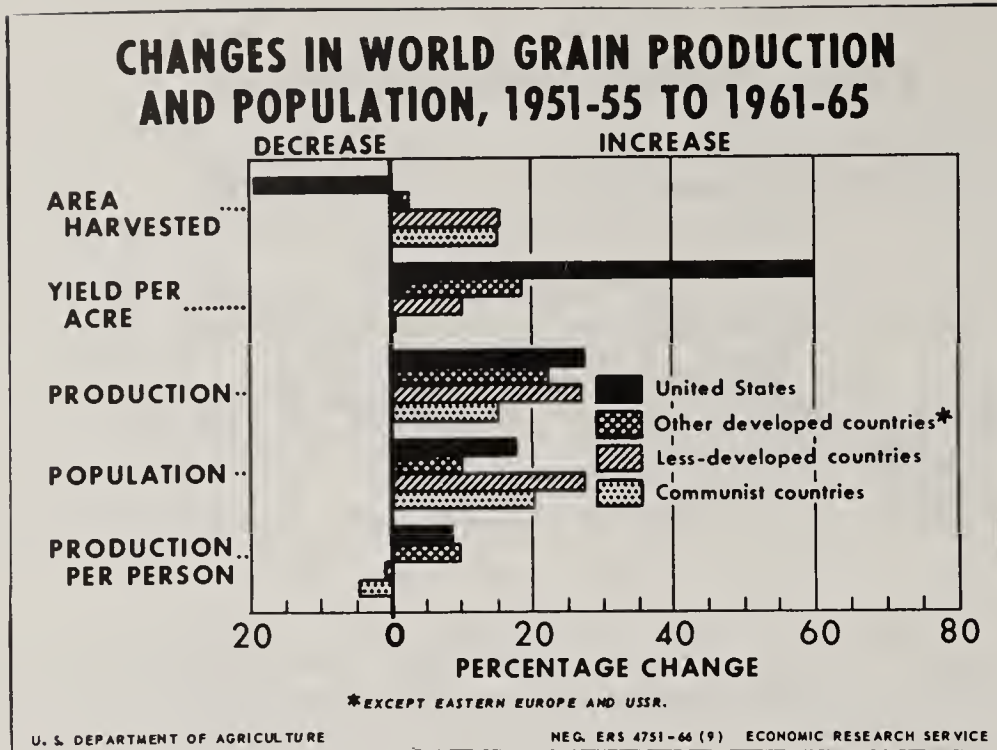
Illustrated highlights of some of the Division's research findings follow:



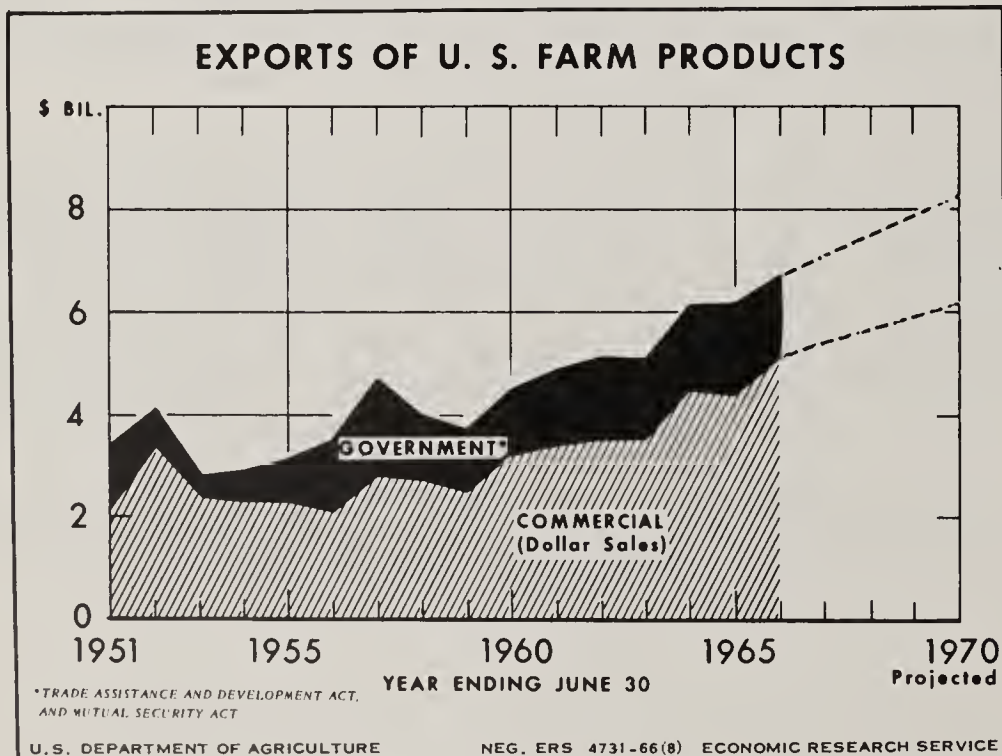
During the past decade, there has been an upward trend in total and per capita agricultural production for both the developed and the less-developed countries of the world. Although total production has increased at a faster rate in the less-developed countries than in the developed countries, the per capita trend in the less-developed countries has been dampened by a high rate of population growth. In terms of per capita food production, there has been some improvement in the less-developed countries of Latin America and the Far East (excluding Mainland China), but no significant change in the less-developed countries of West Asia and Africa.

During the years 1951-55 to 1961-65 the communist countries and the non-communist less-developed countries, with 80 percent of the world population produced on the average less grain per person than a decade earlier. Both groups of countries increased their total production of grain, mostly by cultivating more land, but not fast enough to match the growth of population. Production of other food increased faster than grain in the less-developed countries.

On the other hand, the United States and the other non-communist developed countries in the same span of time raised their yields per acre and total production of grain much faster than their populations grew.



The rapid increase in U.S. agricultural exports in the past decade has had a significant impact on world trade and on American agriculture. The value of agricultural exports increased to \$6.2 billion in FY-1965 and \$6.7 billion in FY-1966. We expect them to increase to more than \$8 billion by 1970.



Around a sixth of our total farm output now goes abroad, compared with about a tenth during 1952-54. With high income levels and most people eating well, the U.S. market for farm products expands only a little faster than the growth in population. The demand for food is rising more rapidly in the rest of the world and exports have become the fastest growing outlet for U.S. farm products. Agricultural exports probably will take an increasing share of U.S. farm output during the rest of this decade.

Most of the increase in agricultural exports in the past four years has occurred in the commercial market. In 1965, about three-fourths of U.S. agricultural exports were commercial and three-fourths of these dollar sales went to developed countries. Our most important export markets are Japan, Canada and Western Europe. In 1965 sales to Japan were valued at \$0.9 billion, to Canada at \$0.6 billion, and to Western Europe at \$2.4 billion--of which \$1.5 billion went to EEC countries. Practically all of these exports were for dollars. These markets should continue to be good outlets in the next decade. We expect the commercial market to be over \$6 billion by 1970, with Japan the leading single market at a level of \$1.4 billion. Exports to Western Europe should rise to about \$3.2 billion.



## AREA NO. 1 -- CURRENT SITUATION AND SHORT-RUN OUTLOOK

### PROBLEM

Current intelligence on foreign production, consumption, and trade is needed in order that the public may be adequately informed and that public policy-makers may render intelligent judgments and decisions. Is India facing another food crisis this year? What is the short-run outlook for Western European agricultural imports? With major commitments to Communist countries, will Canada be capable of supplying its traditional grain markets in the coming year? The problem is to evaluate these and other current foreign developments significant to U.S. agriculture, and to provide U.S. policy-makers, agricultural export interests, and the American public with timely appraisals of these developments.

### USDA PROGRAM

The Department has a continuing program to obtain, appraise, and disseminate information in this area. In the period covered, this work has required 29 scientist man-years in Washington.

Work in this area includes:

- (1) Appraisal of the current food and agricultural situation in foreign countries and the short-run outlook for the demand and supply of farm products;
- (2) Preparation of the annual World Agricultural Situation and the Regional Agricultural Situation Reports;
- (3) Analysis of foreign agricultural and trade policies designed to protect agriculture, encourage trade, and support prices and income of agricultural producers;
- (4) Preparation of annual indices of agricultural and food production to measure trends and compare rates of growth;
- (5) Preparation of food balances to assess the size and quality of food supply;
- (6) Compilation and analysis of data on the agricultural economies of foreign countries and other materials for use in briefing U.S. officials and other individuals traveling abroad;
- (7) Analysis of foreign countries financial position, trade trends, and economic development (in cooperation with DTA).

## PROGRAM OF STATE EXPERIMENT STATIONS

The State Experiment Stations report no research under this specific classification.

## USDA PROGRESS

A. Africa and Middle East Branch

1. Africa and West Asia Agricultural Situation (continuing project)--Agricultural production in all of Africa was up nearly 2 percent in 1965 but this was not enough to hold per capita production at the previous year's level. Declines in output were registered in East and Southern Africa because of drought. Production in the rest of Africa improved. West Asian agricultural production was up 3 percent in total and 1 percent per capita. According to the midyear 1966 review, grain shortages have developed in Northern Africa and parts of West Asia. Production in East and Southern Africa recovered in 1966.
2. Agricultural Production Indices (continuing project)--In the period under review indices of agricultural and food production were completed for 39 countries in Africa and West Asia.
3. Agricultural Economy of Lebanon--Modest increases of high value agricultural products are probable in Lebanon as technology improves productivity. However, with limited land and water, the country will require increasing imports of agricultural products, especially grains and livestock products.
4. The Agriculture of West Asia--This study covers natural resources for agriculture; volume and characteristics of farm production; degree of self-sufficiency in farm products; scope, composition and direction of international trade in agricultural commodities; and development goals and achievements. Increases associated with changes in technology in the region will not come quickly, and the need for food imports probably will increase markedly.
5. The Agricultural Economy and Market Potential of the Arabian Peninsula--This oil-wealthy area is not able to produce enough food for the populace, and the outlook is for increasing import requirements. At present, in spite of important United States interests and investments in the Peninsula, many relatively small but lucrative dollar markets for U.S. agricultural products have not been exploited. The research is between 75 and 80 percent completed.
6. Agricultural Economies in Brief--These studies describe the agricultural resources, production, policy, and trade of the country. Studies on Libya, Senegal, Jordan, and Cyprus were published and a manuscript on Uganda was prepared.

7. Improvement of Statistical Data (continuing project)--Work progressed in the preparation of country notebooks containing basic statistical records that are used to facilitate analysis of agricultural developments, to prepare regularly scheduled reports, special analytical studies, and service work. The inadequacy of the basic statistics available from the countries of Africa and the Middle East makes this job a major undertaking. Priority was given to the statistics of Turkey, UAR, and South Africa.
8. Crop Productivity Indices--Trends in production area and yield of principal crops in Syria and Morocco were ascertained for the period 1948-1965. These supplement the indices of other countries furnished previously to be used in the productivity research of the Development and Trade Analysis Division of ERS. Preliminary and investigating work, including some data gathering in the countries, was conducted on similar indices for Angola, Malagasy Republic, Mauritius and Senegal.
9. Livestock Productivity Studies--A detailed analysis of trends in livestock production for the years 1948 to 1965 was made for UAR, Israel, and Turkey. Indices and balances for the various classes of livestock were constructed in order to provide tools not previously available for analyzing the change or lack of change in livestock productivity over the period.

#### B. Europe and Soviet Union Branch

1. Europe and Soviet Union Agricultural Situation (continuing project)--Agricultural production in Western Europe in 1965 increased slightly above the previous year generally reflecting advancing technology, good weather, and favorable agricultural policies. Some grain crops, however, were adversely affected by unfavorable weather at harvest time. In the USSR and Eastern Europe, agricultural performance was generally good in 1965, with notable exceptions being grain in the USSR "New Lands" area and some northern East European countries. Prospects for agriculture in Europe and the Soviet Union were relatively favorable as of midyear 1966. Soil moisture conditions were good. Livestock numbers were generally larger than a year ago and prospects for feed and forage were good.
2. Agricultural Production Indices--A new index was developed for Greece, which indicates that production rose sharply during 1959-65. Increases in grain production contributed significantly to this rise.
3. Inside the Agricultural Index of the USSR--This study was undertaken to fill a major gap in our knowledge of the construction and implications of the Soviet index of agricultural output. Two sets of price weights were compared and the so-called "uniform comparable price weights" were determined to be superior. Using these weights it was possible to duplicate the Soviet gross index in value measurement and

annual change. Additionally, a net value-added index was constructed which should closely approximate that used but not published in the Soviet Union.

4. Crop Statistics Appraisal--Crop statistics in Yugoslavia, Bulgaria, Denmark, and Spain were appraised to determine reliability, timeliness, and usefulness. The conclusions are that data for Yugoslavia and Bulgaria are reasonably comprehensive and accurate but lacking in timeliness. In Yugoslavia the data lag about one year and in Bulgaria about 2 years. Denmark's crop statistics were found to be reasonably comprehensive and accurate. Spanish crop statistics were found to be only fair, with substantial inadequacies for some commodities.
5. Livestock Productivity Studies--A detailed analysis was made of trends (1950-64) in livestock production and efficiency in Poland. The results indicate that stagnation in production during the first part of the 1960's was the result of a combination of institutional and economic factors brought about by governmental policy. Livestock output in Poland is not likely to increase significantly unless some or all of these factors are changed. Livestock productivity studies were also prepared for Spain and Greece. Livestock statistics in Spain proved inadequate for completion of good livestock balances. Livestock productivity has increased in Greece, with sheep constituting an important segment of livestock enterprises.
6. Agriculture in the United States and the USSR--The report indicates that larger quantities of land and labor are used in the Soviet Union to produce a considerably smaller quantity of output than in the United States. Much higher inputs of machinery, fertilizer, and other capital and a more favorable natural and institutional environment account for the considerably higher efficiency of U.S. agriculture.
7. Highlights of Agriculture and Trade--Fourteen brief country studies were prepared for Foreign Agriculture.

#### C. Far East Branch

1. Far East and Oceania Agricultural Situation (continuing project)--The publication released in March 1966 showed that food deficits had increased in a number of countries due to shortfalls in production in some instances and increased consumption resulting from higher per capita income in others. Highlights of the July 1966 midyear review were record food imports, a decline in exports of foodstuffs from almost all of the surplus producing countries of the region, and prospects of a slightly below normal harvest for the region as a whole.
2. Agricultural Production Indices (continuing project)--A new base period (1957-59) was used, the time coverage extended, and a new system of weighting employed. Per capita agricultural output has remained

practically unchanged during the 1960's, following a period of grain during the 1950's.

3. Improvement of Statistical Records (continuing project)--Work has been underway to prepare country notebooks and other basic statistical records that will be used in regularly scheduled reports, special studies, and service work. With few exceptions, the basic statistics available from the countries of this region are quite inadequate.

#### D. Western Hemisphere Branch

1. Western Hemisphere Agricultural Situation (continuing project)--The annual situation report indicated that, with few exceptions, Western Hemisphere countries maintained an upward trend in economic growth and foreign exchange reserves during 1965. This trend was supported by record farm output and expansion of agricultural exports. However, the midyear review suggests that the 1966 outlook is for lower production of principal Hemisphere export commodities including feed-grains, coffee, sugar, and dairy products.
2. Agricultural Production Indices (continuing project)--The method of computing the production indices was changed with a shift from split year to calendar year. The weights were changed and the series was extended. The revised index of agricultural production for the 20 Latin American Republics was forecast at 125 for 1965, compared with 116 for 1964 (1957-59 = 100).
3. Improvement of Statistical Records (continuing project)--A project to collect basic data in country notebooks is underway. Priority has been given to Canada, Mexico, Argentina, Brazil, and Venezuela.
4. Crop Productivity Indices--Indices were developed to ascertain productivity trends for principal crops in 12 less-developed countries in Latin America and in Puerto Rico. They supplement similar indices previously prepared for Mexico, Costa Rica, and 5 major South American countries used as a basis for analysis in Changes in Agriculture in 26 Developing Nations, 1948 to 1963, FAER No. 27, November 1965. Significant gains in crop yields were found in El Salvador, Nicaragua, Puerto Rico, and Uruguay with little change in Guyana, Honduras, and Peru. Trends in crop yields for the remaining countries could not be determined with precision because of inadequate data, especially on area.
5. Notes on the Agricultural Economies of Dependent Territories--A downturn in income from agriculture in these territories has been offset by the development of tourism and related industries in recent years, which in turn has fostered a growing demand for many temperate zone agricultural products.

6. Notes on the Agricultural Economies of Western Hemisphere Countries-- Basic data have been developed for population, income, consumption, land use, resource organization, policies, production, and trade.

7. Country Studies

- a. Panama--Because of stability provided by Canal revenue and because of limited agricultural development, Panama is expected to provide a continuing market for many U.S. farm products.
- b. Highlights of Agriculture and Trade--Nine brief country studies were prepared for publication in Foreign Agriculture.
- c. Other studies--Preliminary research was completed and projects approved for studies of agriculture in Ecuador and Puerto Rico. Because of growing competition in world banana trade, Ecuador faces problems of diversification of its agriculture and exports. With strong economic growth since 1950, Puerto Rico has provided an expanding market for U.S. agricultural products.

E. World Agricultural Situation (continuing project)--Total world production of agricultural products in 1965 was only 1 to 2 percent higher than in 1964, a smaller gain than in each of the previous 2 years. Food production--dominated by the cereal crops, which increased only 1 percent--rose significantly less than the rise in world population. While production in the Western Hemisphere and in Western Europe rose faster than population, the reverse was true in most of the rest of the world. Total production fell in Eastern Europe and the USSR, dropping output per capita significantly. In Asia, including China, total agricultural output was larger than in 1964, but output per person declined.

PUBLICATIONS REPORTING RESULTS OF USDA RESEARCH

Africa and Middle East

Africa and Middle East Branch. The Africa and West Asia Agricultural Situation, Review of 1965 and Outlook for 1966. U.S. Department of Agriculture. ERS-Foreign 153, 97 pages, 1966.

Africa and Middle East Branch. The Africa and West Asia Agricultural Situation, Midyear Review, 1966. U.S. Department of Agriculture, ERS-Foreign 164, 12 pages.

Africa and Middle East Branch. Indices of Agricultural Production in 29 African Countries, December 1965. U.S. Department of Agriculture, 63 pages.

Africa and Middle East Branch. Indices of Agricultural Production in 10 Near East Countries, December 1965. U.S. Department of Agriculture 27 pages.

- Kampe, Ronald E. The Agricultural Economy of Lebanon, 1965. U.S. Department of Agriculture. ERS-Foreign 138, 27 pages.
- Santmyer, Carolee. Libya's Agricultural Economy in Brief, 1966. U.S. Department of Agriculture. ERS-Foreign 147, 8 pages.
- Skinner, Snider W. Senegal's Agricultural Economy in Brief, 1966. U.S. Department of Agriculture. ERS-Foreign 166, 11 pages.
- Tegeler, Henrietta Holm. The Agriculture of West Asia, 1966. U.S. Department of Agriculture. ERS-Foreign 143, 75 pages.
- Tegeler, Henrietta Holm. Jordan's Agricultural Economy in Brief, 1966. U.S. Department of Agriculture. ERS-Foreign 146, 8 pages.
- Tegeler, Henrietta Holm. Cyprus' Agricultural Economy in Brief, 1966. U.S. Department of Agriculture. ERS-Foreign 159, 9 pages.
- Santmyer, Carolee. How Tunisia is Developing Its Medjerda River Valley. U.S. Department of Agriculture. 3 pages. (Foreign Agriculture, July 11, 1966).
- Treakle, H. Charles. Iraq's Date Industry. U.S. Department of Agriculture. 2 pages. (Foreign Agriculture, November 29, 1965).
- Treakle, H. Charles. Frankincense and Myrrh are Ancient Treasures Still Moving in World Agricultural Trade Today. U.S. Department of Agriculture. 1 page. (Foreign Agriculture, December 20, 1965).
- Warren, Cline J. Farm Production at Peak in UAR but Faster Growth Needed. U.S. Department of Agriculture. 1 page. (Foreign Agriculture, December 27, 1965).
- Warren, Cline J. UAR's Second 5-Year Plan Shifts Stress to Agriculture. U.S. Department of Agriculture. 1 page. (Foreign Agriculture, May 2, 1966).

#### Europe and Soviet Union

- West European Branch. The Western Europe Agricultural Situation, Review of 1965 and Outlook for 1966. U.S. Department of Agriculture. ERS-Foreign 149, 75 pages. 1966.
- East European Branch. The U.S.S.R. and Eastern Europe Agricultural Situation, Review of 1965 and Outlook for 1966. U.S. Department of Agriculture. ERS-Foreign 151, 61 pages. 1966.
- Europe and Soviet Union Branch. The Europe and Soviet Union Agricultural Situation, Midyear Review. U.S. Department of Agriculture. ERS-Foreign 161, 8 pages. 1966.

- Cohen, Marshall H. Highlights of the Agriculture and Trade of the Netherlands. U.S. Department of Agriculture. 1 page. (Foreign Agriculture, June 20, 1966).
- Cohen, Marshall H. Survey Finds Sweden to be a Potentially Good Market for U.S. Agricultural Products. U.S. Department of Agriculture. 2 pages. (Foreign Agriculture, May 30, 1966).
- Cohen, Marshall H. Highlights of the Agriculture and Trade of Denmark. U.S. Department of Agriculture. 1 page. (Foreign Agriculture, June 13, 1966).
- Danyluk, A. Paul. Highlights of the Agriculture and Trade of Poland. U.S. Department of Agriculture. 1 page. (Foreign Agriculture, July 18, 1966).
- Danyluk, A. Paul. Highlights of the Agriculture and Trade of Czechoslovakia. U.S. Department of Agriculture. 1 page. (Foreign Agriculture, August 1, 1966).
- Lopes, James. Spain to Import More Agricultural Products this Year. U.S. Department of Agriculture. 1 page. (Foreign Agriculture, March 7, 1966).
- Lopes, James. Highlights of the Agriculture and Trade of France. U.S. Department of Agriculture. 1 page. (Foreign Agriculture, May 30, 1966).
- Lopes, James. Expansion Seen for Portugal's Agricultural Imports. U.S. Department of Agriculture. 1 page. (Foreign Agriculture, June 6, 1966).
- Lopes, James. Highlights of the Agriculture and Trade of Spain. U.S. Department of Agriculture. 1 page. (Foreign Agriculture, June 27, 1966).
- Neetz, Roger E. Foot and Mouth Disease Continues to Plague Europe. U.S. Department of Agriculture. 2 pages. (Foreign Agriculture, February 7, 1966).
- Neetz, Roger E. Yugoslavia's Economic Reform. U.S. Department of Agriculture. 2 pages. (Foreign Agriculture, April 25, 1966).
- Neetz, Roger E. Highlights of the Agriculture and Trade of Hungary. U.S. Department of Agriculture. 1 page. (Foreign Agriculture, July 25, 1966).
- Neetz, Roger E. Highlights of the Agriculture and Trade of Yugoslavia. U.S. Department of Agriculture. 1 page. (Foreign Agriculture, August 22, 1966).

- Neetz, Roger E. Inside the Agricultural Index of the USSR. U.S. Department of Agriculture. 9 pages. (New Directions in the Soviet Economy, JEC, Congress of the United States, Washington, 1966).
- Riggs, David W. Highlights of the Agriculture and Trade of the United Kingdom. U.S. Department of Agriculture. 1 page. (Foreign Agriculture, May 23, 1966).
- Riggs, David W. 1966 Green Report: Progress and Problems on West German Farms. U.S. Department of Agriculture. 1 page. (Foreign Agriculture, April 4, 1966).
- Soroka, Natasha. Highlights of the Agriculture and Trade of Bulgaria. U.S. Department of Agriculture. 1 page. (Foreign Agriculture, August 15, 1966).
- Tsu, Sheldon. Highlights of the Agriculture and Trade of Greece. U.S. Department of Agriculture. 1 page. (Foreign Agriculture, July 4, 1966).
- Tsu, Sheldon. Highlights of the Agriculture and Trade of Italy. U.S. Department of Agriculture. 1 page. (Foreign Agriculture, June 6, 1966).
- Walters, Harry E. Soviet Report on 1965 Farm Output. U.S. Department of Agriculture. 2 pages. (Foreign Agriculture, February 21, 1966).
- Walters, Harry E. Highlights of the Agriculture and Trade of the Soviet Union. U.S. Department of Agriculture. 1 page. (Foreign Agriculture, July 11, 1966).
- Walters, Harry E. Agriculture in the United States and the USSR. U.S. Department of Agriculture. 8 pages. (New Directions in the Soviet Economy, Part IIB., JEC, Congress of the United States, Washington, 1966).
- Zazove, Carol A. Highlights of the Agriculture and Trade of Romania. U.S. Department of Agriculture. 1 page. (Foreign Agriculture, August 8, 1966).

#### Far East

- Far East Branch. Far East, Mainland China, Oceania Agriculture Situation. U.S. Department of Agriculture. ERS-Foreign 152, 76 pages, 1966.
- Far East Branch. The Far East and Oceania Agricultural Situation, Midyear Review. U.S. Department of Agriculture. ERS-Foreign 162, 16 pages, 1966.

Far East Branch. Indices of Agricultural Production for East Asia, South Asia, and Oceania. U.S. Department of Agriculture. 43 pages, 1965.

Larsen, Marion R. Agricultural Situation in Mainland China. U.S. Department of Agriculture. 3 pages. (Foreign Agriculture, August 8, 1966).

#### Western Hemisphere

Western Hemisphere Branch. The 1965 Western Hemisphere Agricultural Situation U.S. Department of Agriculture. ERS-Foreign 154, 70 pages, 1966.

Western Hemisphere Branch. Western Hemisphere Agricultural Situation, Mid-year Review, 1966. U.S. Department of Agriculture. ERS-Foreign 163, 12 pages, 1966.

Western Hemisphere Branch. Indices of Agricultural Production for 20 Latin American Countries, 1966. U.S. Department of Agriculture. ERS-Foreign 44 (Revised) 25 pages, 1966.

Bennett, Gae A. Highlights of the Agriculture and Trade of Venezuela. U.S. Department of Agriculture. 1 page. (Foreign Agriculture, September 12, 1966).

Chrisler, Donald. Cuba in 1965--Agricultural Situation and Food Supply. U.S. Department of Agriculture. 2 pages. (Foreign Agriculture, February 28, 1966).

Kennedy, Richard M. Highlights of the Agriculture and Trade of Argentina. U.S. Department of Agriculture. 1 page. (Foreign Agriculture, September 5, 1966).

Kennedy, Richard M. Highlights of the Agriculture and Trade of Chile. U.S. Department of Agriculture. 1 page. (Foreign Agriculture, September 26, 1966).

McAlpine, John D. Drought Holds Cuba's 1966 Sugar Harvest 30 Percent Below Goal. U.S. Department of Agriculture. 1 page. (Foreign Agriculture, July 18, 1966).

Ruff, Samuel O. Brazil's 1965 Farm Production Reflects Economic Uptrend. U.S. Department of Agriculture. 3 pages. (Foreign Agriculture, March 28, 1966).

Ruff, Samuel O. Highlights of the Agriculture and Trade of Brazil. U.S. Department of Agriculture. 1 page. (Foreign Agriculture, August 29, 1966).

Ruff, Samuel O. Highlights of the Agriculture and Trade of Peru. U.S. Department of Agriculture. 1 page. (Foreign Agriculture, September 19, 1966).

Sanderson, Agnes G. Notes on the Agricultural Economies of Dependent Territories, 1965. U.S. Department of Agriculture. ERS-Foreign 145, 68 pages, 1965.

AREA NO. 2 -- DEMAND FOR AND COMPETITION WITH  
U.S. AGRICULTURAL EXPORTS

PROBLEM

In many foreign markets United States farm products are facing a change in the competition or demand situation that directly affects their sales. There is a growing volume of requests for information on foreign competition and demand arising from political and economic developments abroad. The problem is to provide an appraisal of developments by country and region in agriculture and in the overall economies of foreign countries in order that American farmers, agricultural export interests and governmental agencies may take advantage of opportunities for developing new and maintaining or expanding existing foreign markets for U.S. farm products.

USDA PROGRAM

In line with the growing need for information on foreign competition and demand, the USDA has a continuing program to conduct research and disseminate information in this area. Research projects are generally organized within the four Regional Branches although work on commodities cuts across regional lines. In the period covered, this work has required 16 scientific man-years annually in Washington, and contracts for research averaging about 3 scientific man-years annually.

Work in this area includes analysis of:

- (1) Trends in demand, supply and trade of farm products within our major markets; growth of population and income; financial and trade policies which affect agricultural trade; effects of changes in marketing, consumption, prices, stockpiling and trade patterns on U.S. farm exports.
- (2) Agricultural developments within countries which are major competitors with the United States in world agricultural markets; changing production and trade patterns caused by rising productivity and adjustments in cost-price relationships; market organization and export promotion; and other measures which encourage agricultural production and trade.
- (3) World production of and trade in agricultural commodities. Data are maintained for commodity groups in a program of continuing commodity analysis relating to foreign market demand and world food and fiber needs. Such data also supply the basis for projection work of the Division.

- (4) Agricultural developments in the less-developed countries, particularly as they relate to requirements for food and qualification under the "self-help" criteria of P.L. 480.

#### PROGRAM OF THE STATE EXPERIMENT STATIONS

The California station in a study of agricultural development in Mexican West Coast vegetable producing areas has found that technology of tomato production has improved rapidly with yields per acre well above those of mid-winter in California. The study covers freight and tariff costs, comparative labor costs in production and packing operations and it has appraised the importance of capital and "know how" from California in the West Coast Mexican development. Economics of public investment decisions have been studied under the same project. A case study of the Tepalcatepec River Basin project supported the hypothesis that public investment stimulates private investment and an agricultural export base but does not necessarily give rise to local industrialization.

Under another project the California station studied the possibilities for expanding exports of selected California products in particular area, including Thailand, Italy and the EEC countries in general. A transportation model of the world citrus industries was completed. Results indicate the probability of higher prices for both winter and summer oranges over the next 5 to 10 years.

#### USDA PROGRESS

##### A. Africa and Middle East Branch

1. Agricultural Development Within the Nile Basin--This study will define the major agricultural development projects within the Nile Basin and determine the magnitude of increased agricultural production likely to result from these projects. The competitive aspect of this increased production on U.S. farm exports will be carefully assessed. The U.A.R. has been a major market for U.S. grains. Publication of the research results is planned for 1967.
2. Effect of Oilseed Production Potential in Selected African Countries on United States Exports to the European Economic Community--This research projects the expected future level of demand, supply, and exports of oilseed products in Nigeria, Senegal, and the Congo (Kinshasa), and analyzes the implications for U.S. exports to the European Economic Community. The Contractor for this research was Manning-Berg Research Associated Ltd., Edmonton, Alberta, Canada, Research Director was Dr. Eric R. Berg. The final report has been received from the Contractor, and final alterations to the manuscript and editing for publication are nearly complete.

3. Planning the Economic Development of Tanzania, 1970-1980--This study examines the problems of changing Tanzania's subsistence agriculture into a market agricultural economy. Tanzania needs more agricultural production both for cash exports and for domestic consumption. Population is accelerating at about 3 percent per year and urbanization is increasing. Rapid increases in the domestic demand for agricultural products, particularly wheat and corn, are expected in the near future. The income elasticity of demand for food products is very high; therefore, as per capita income increases, a large increase in demand for food products will occur.

B. Europe and Soviet Union Branch

1. A contract with Oxford University for conducting a comprehensive survey of European agricultural economic studies in the EEC is nearly completed. The survey has made available a number of useful studies on a wide variety of agricultural subjects.
2. A contract is in effect with Stanford Food Research Institute for supplying information on trends in grain production in France and West Germany and appraising the probable effects of proposed Common Market agricultural policies on future grain production and trade in these countries. Parts of this study have already been published and the project will be completed in FY-1967.
3. A contract is in effect with the Giannini Foundation, University of California for studying the production and trade policies for fruits and vegetables in Italy. The study will examine the influence of the Common Market on demand for fruits and vegetables and the resulting impact upon the market for California fruits and vegetables. This project is scheduled for completion in FY-1967.
4. A contract was signed in July 1966 with Cornell University for the preparation of livestock-feed balances for selected West European countries (United Kingdom, Netherlands, West Germany, Italy, France, Belgium, Spain, Denmark, and Switzerland). This project will bring together into systematic form annual livestock feed requirements, domestic feed production, and feed imports for use in forecasting probable feed imports. Work is underway on the United Kingdom. Research on this project is expected to extend until December 1968.
5. A contract is in effect with Agri-Research Inc., Manhattan, Kansas for a study of agricultural marketing in Yugoslavia. This project will improve understanding of the processes of marketing domestically produced and imported agricultural products in Yugoslavia--along with the policies and institutions affecting the volume, value, and trends of agricultural production and marketing--as a basis for appraising the potential market for U.S. farm products in Yugoslavia. Completion of the project is scheduled for FY-1967.

6. Factors Affecting the Demand, Supply, and Trade of Agricultural Commodities in the EEC, and Some Current Projections--This study reviews and compares the major studies which have analyzed factors affecting the demand, supply and trade of agricultural products in the Common Market. The study is scheduled for publication in early 1967.
7. Annotated Bibliography on Common Market Agriculture--The bibliography will combine studies from the Oxford survey of literature with studies located by the ESU Branch. Publication of the bibliography is planned for mid-1967.
8. Causes and Implications of the USSR Wheat Import Agreement with Canada (1966-69)--This is a brief analysis of the major reasons for the agreement of the USSR to import 9 million tons of wheat from Canada over a 3-year period. The analysis concluded that the Soviet Government made the agreement because it realized that world wheat supplies were tightening and that in the next 3 years the Soviet Union would likely need to import wheat if shortfalls similar to 1963 and 1965 took place.

#### C. Far East Branch

1. Foreign Competition and Demand for U.S. Farm Products in the Japanese Market--This study analyzes in detail the competitive position which U.S. farm products face in the Japanese market. It covers historical developments, the current situation and the outlook for the future. The study reveals that the Japanese market for imported farm products is expected to grow rapidly and that the U.S. has the opportunity to share fully in this growth. Competition faced by U.S. exports varies widely between commodities. For example, competition has grown increasingly keen in the case of cotton, whereas soybean exporters have faced competition from only one other producer--Mainland China--and the availability from that source has not materially expanded while Japanese demand has steadily increased. An outstanding example of the expansion possibilities offered by Japan is feedgrains, the demand for which has multiplied several times in recent years to meet the requirements of the rapidly expanding poultry and livestock industries.

This study has been completed and is now in the process of being printed. The publication is expected to be of great value to U.S. agriculture as it will be the most thorough as well as the most up-to-date report on the largest foreign market for U.S. farm products.

2. Developments in Agricultural Production and Food Requirements of Mainland China under the Communist Regime--This study analyzes in detail the agricultural and food situation in Mainland China as it has developed since the communist take-over in 1949. The carrying out of this study has been particularly difficult due to the lack of basic statistics on farm production and population in the pre-communist

era and the secretiveness regarding such matters on the part of the communist government.

Many noteworthy changes have taken place under the communists. Major emphasis has been placed on socializing the farm sector of the economy. In recent years there has been a major switch of foreign trade from the Soviet Union to free world sources. Since the beginning of the 1960's, Mainland China has switched from a net foodgrain exporter to the world's largest cash market for imported foodgrains. This study is nearly completed.

3. Australian Competition in the Market for Farm Products in Far East Countries--Major changes have occurred in the destination of Australia's farm exports. An increasing proportion of total exports go to Far East markets. Australian government policy is to increase trade with this area of the world. Developments in the Commonwealth including the possibility that the United Kingdom, traditionally Australia's major export outlet, might join the EEC have contributed to the desire to increase exports to the Far East area. Important markets for Australia exist in most countries of the region--the most important markets are Japan and Mainland China. Many of Australia's farm exports are similar to U.S. farm products. Australia-U.S. competition involves such important farm exports as wheat, barley, meats, tallow, hides and skins, fruits, poultry and dairy products. This study has been started recently.

#### D. Western Hemisphere Branch

1. Peru - Market and Competitor for U.S. Farm Products--This project was initiated in 1964/65 with final revisions and review completed in the current year. In recent years, Peruvian agriculture and fishery industries have provided growing competition for U.S. farm products, but they have failed to meet a rising demand for food. Despite an anticipated increase in competition from other suppliers, Peru is expected to provide a growing market for U.S. grains, fats and oils and other farm products.
2. The Agricultural Economy of Brazil-Competition and Demand--This project was initiated in 1964/65. Agriculture provides a large share of Brazilian income, export earnings, and the food needs for a growing population estimated near 82 million in mid-1965. New policies oriented to the diversification of foreign trade are expanding potential competition with the United States, particularly in corn, rice, soybeans, and meat.
3. Mexican Agriculture-Its Competitive Position--This project was initiated in 1964. During the past two decades, agricultural development has expanded Mexican competition with U.S. cotton, cereals, and fruits and vegetables. However, U.S. agricultural exports to the Mexican market have risen steadily.

4. Competitive Aspects of Argentine Agriculture--This project was initiated in 1964. Argentina's position as a competitor in U.S. markets for grains, oilseeds, livestock and other agricultural products weakened after World War II. Recent developments indicate that Argentina is making substantial progress toward recovery in its position as a competitor in world markets for farm products.

## PUBLICATIONS REPORTING RESULTS OF RESEARCH

### USDA

#### Europe and Soviet Union Branch

- Shepherd, Robert E. EEC Council to Act Soon on Proposal for Common Prices. 1 page. (Foreign Agriculture, June 27, 1966).
- Shepherd, Robert E. Dutch Research Foresees Steep Decline in EEC Grain Imports by 1970. 2 pages. (Foreign Agriculture, September 19, 1966).
- Friend, Reed E. EEC Embarked on Two Programs to Bolster its Farm Statistics. 1 page. (Foreign Agriculture, December 6, 1965).
- Friend, Reed E. New Common EEC Farm Prices--More Production, More Protection. 1 page. (Foreign Agriculture, August 22, 1966).
- Friend, Reed E. U.S. Farm Exports to the Common Market Show Increase. 2 pages. (Foreign Agriculture, June 27, 1966).
- Friend, Reed E. and Berntson, B.L. EEC--Wide Fund Gains More Control Over Common Farm Policy. 1 page. (The Farm Index, June 1966).
- Friend, Reed E. Foreign Spotlight: European Economic Community. 1 page. (The Farm Index, March 1966).
- Friedmann, Karen J. and Farnsworth, Helen C. Grains in German Farming: Past Developments and Prospects for 1970 and 1975. 64 pages. Foreign Research Institute Studies, Vol. VI, No. 1, 1966. Food Research Institute, Stanford University, Stanford, California.

#### Western Hemisphere Branch

- Hall, Howard L. Peru-Market and Competitor for U.S. Farm Products, 1966. 41 pages. U.S. Department of Agriculture, ERS-Foreign 157.

RELATED PUBLICATIONS OF STATE EXPERIMENT STATIONS

- King, R.T.F. River Basin Projects and Regional Development in Mexico: Investment Criteria and Development Strategy, (Ph.D. thesis, University of California) to form major part of a book on development economics now in preparation. 1965.
- Brian, B.M. and Hoos, Sidney. California Agriculture and World Trade; California Agriculture, California Agricultural Experiment Station, Vol. 19, No. 1, 10-12 pages. 1965.

## AREA NO. 3 -- LONG-RANGE OUTLOOK FOR U.S. AGRICULTURAL EXPORTS

### PROBLEM

In the first half of the 1960's supplies of U.S. agricultural products were greatly in excess of domestic needs. As a result domestic programs for curtailing U.S. output and for increasing exports were essential to the welfare of agriculture and the national economy. By 1966 the problem changed from that of disposing surpluses to managing prudently U.S. resources to meet increasing world food needs. This turnabout resulted from a combination of successful curtailment of domestic production, increased commercial imports in developed nations and increased food-aid assistance in less-developed nations with rising populations and lagging production. The problem now and for the future is how the United States should harness its productive capacity to meet world food needs efficiently without recurring cyclical shortages and surpluses.

Knowledge of supply and demand trends and import requirements in foreign countries and the location of new opportunities for U.S. farm exports is essential if the United States is to develop its farm exports to the fullest extent consistent with the economic utilization of U.S. agricultural resources.

Record exports of U.S. farm products, valued at \$6.7 billion in FY-1966 and with prospects of over \$8 billion in 1970, contribute substantially to the income of U.S. agriculture and industries engaged in processing and merchandizing farm products. They are also an important element in foreign exchange earnings.

### USDA PROGRAM

The Department has a long-term program for projecting foreign supply, demand, and trade of selected farm products and for relating world import needs to U.S. exports of farm products. The total research program involves 12 scientist man-years annually in the Department of Agriculture to perform economic research in Washington and also to develop and supervise research programs abroad performed by research institutions on a contract basis under Section 104(a) of Title I, P.L. 480. The contract research involved about 58 scientist man-years during the reporting period.

The research program covers four areas:

1. World Food Needs: Research in this area is a continuation of the work of the world food budget initiated in 1961. The work on the world food budget involves publishing every five years a comprehensive summary of world food needs, by countries and major subregions of the world. This program, which projects food needs five or more years ahead, was initially

developed to expand food consumption in the world, to help provide an adequate diet and to help use our food abundance to build sustained economies in the less-developed countries. The last detailed projections for 1970 were published in 1964. With world food needs a continuing and changing problem periodic analyses are made updating parts of the comprehensive study for use in special studies for administrators, other agencies, task forces and other requestors. This also involves making preliminary estimates to 1975 and 1980 to meet the growing demand for projections of world food needs.

These analyses assess and evaluate food needs in less-developed countries in relation to nutritional needs, supply-demand balances, import requirements, and the extent to which these nations can improve their production without raising food costs unduly.

2. Projections of U.S. Exports of Farm Products: Work in the second research area involves annual projection of exports of leading U.S. agricultural commodities by quantity and value. This work is related to that of economic analysts in the Department working on U.S. agricultural output and availabilities for export. Together they provide the long-range outlook for U.S. farm commodities. This work includes projections based upon various assumptions as to programs and prices of leading U.S. products in the world market. It is entirely performed in Washington by the Department of Agriculture with departmental personnel.
3. World Supply and Demand Projections: Work in the third research area deals with long-term projections of foreign supply and demand. This involves contracting with competent research organizations for comprehensive country studies to analyze and project ahead to 1970, 1975 and in recent studies to 1980 the import demand and export availability of agricultural products which are important U.S. export commodities. The Division plans, supervises and reviews the studies at different stages of development. Results are published initially in reports, largely as submitted by Contractor. Another document is prepared by the Foreign Regional Analysis Division which summarizes, analyzes, and evaluates the results of the study and spells out the implications for U.S. agriculture. The research also involves utilizing and integrating the results of these country studies into our regular projections work and special studies of major regions and for the world. The actual performance of the research within foreign countries is carried out by research-contractors who are paid with foreign currency generated from exports under Title I of P.L. 480.
4. Demand for Agricultural Exports of Less-Developed Countries: Research in the fourth area involves projections of immediate and long-term world demand prospects for products exported by less-developed countries. This ERS research for AID is being done in cooperation with the Foreign Development and Trade Division. The work also involves developing an analytical framework for making projections. These projections of import

demand, together with projected export supplies will be used as a basis for evaluating the effects of trade policies on potential export earning of less-developed nations.

#### PROGRAM OF STATE EXPERIMENT STATIONS

The State Experiment Stations report no research under this specific classification.

#### PROGRESS IN USDA AND FOREIGN RESEARCH CONTRACTORS' PROGRAMS

##### A. World Food Needs

There has been increasing interest in world food needs among U.S. policy makers. As a result, in the reporting period increased effort was placed on assessing and evaluating world food needs in less-developed countries. Special emphasis was given to a comprehensive analysis of the production-consumption balance and import needs to fill the food gap. Our studies assume that growth in personal income is essential to economic growth in the developing countries. Increased incomes are accompanied by greater demand for food, which is not being met by lagging domestic production. Increased per capita consumption became possible through increased concessional sales. These studies show that while the productive capacity of the United States is sufficient to fill the consumption-production gap in the 1970's, the long-run solution for the developing countries is to accelerate domestic food production.

As part of the overall continuing analysis of World Food Needs, the work done for the Interagency Task Force (as reported in the last reporting period) to study the food requirements for AID in recipient countries for 1970, 1975, and 1980 was used in special analyses in the development of food policies, and also as a basis for material furnished the Food and Fiber Commission. Additional material furnished the Food and Fiber Commission in the summer of 1966 included revised 1970 grain projections for production, consumption and trade for subregions as published in the World Food Budget in 1964, and preliminary projections for 1980.

Individual country projections of production, consumption and import requirements were made for important AID recipient countries. These studies were used by the Department of Agriculture and AID in evaluating P.L. 480 programs.

The work on world food needs also included projections of production and use of grains, proteins and fats and oils under alternative assumptions for 1970, 1975, and 1980 for use as background material for U.S. representatives at a July meeting of the Development Assistance Committee of OECD.

An analysis and evaluation was made of the new Soviet agricultural plan (1966-70) in the light of past performance and the increased inputs and

other policy changes called for in the plan. The general conclusions are that the recent policy changes and increases in inputs and incentives embodied in the new plan represent a significant change over earlier periods and will substantially increase output of grains, industrial crops, and livestock products in 1966-70. However, the estimated increases are below those anticipated in the new plan.

An analysis was made of recent production, utilization, and trade situation for grains in the major communist areas and projections to 1970 were made. Mainland China's and Cuba's present levels of grain imports from non-communist countries probably will continue and might even increase. Eastern Europe's imports of foodgrains probably will decline slightly but imports of feedgrains will grow. Grain imports by the Soviet Union are not likely to continue and the USSR will most likely be a net grain exporter by 1970, or shortly thereafter.

#### B. Projections of U.S. Exports of Farm Products

As part of the ERS responsibility for making international trade projections, several projections of U.S. agricultural exports have been made in answer to specific requests and for administrative use. A detailed study was made in which projections for 1970 were made for U.S. exports of major food commodities or groups of commodities to nineteen regions of destination. This study indicated that exports would rise to more than \$8 billion by 1970 compared to \$6.7 billion in fiscal year 1966. The study was concerned with both the commercial and concessional market and indicated that most of the trade in the commercial market will continue, as in the past, to be between developed nations. The study projected substantial increases in exports of feedgrains and soybeans to Western Europe and Japan, reflecting a policy of these nations to develop livestock economies rather than import livestock products. The study also shows that while feedgrain exports were increasing to developed nations, wheat exports would continue to increase to less-developed countries, mostly under the food--aid program. An important factor in the commercial market is that China and USSR have become net importers of grain. The study indicated that the USSR may again be a net exporter by 1970. Studies were also made showing preliminary projections for grains to 1980.

#### C. Long-Term Projections of Supply and Demand

Utilizing Section 104(a), Title I, P.L. 480 funds, basic country studies are carried out under contract by research organizations with adequate facilities and familiarity with the problems to be studied. The contractor is usually an organization in the country being studied. Work included development of plans of work in cooperation with the contractor for studies initiated during the current reporting period. These plans aid in keeping the various country studies in line with the general framework previously developed.

Consultations on research and technical problems were held from time to time with research workers in the contracting agency. Required progress reports were reviewed and analyzed. Considerable time was spent in critical review and assistance in preparation of final drafts of these country studies. Cost of the studies varies widely, depending on the availability and reliability of data and the extent to which the data can be utilized for time series, cross-sectional and other projectional analysis. Time involved with studies varies from 18 to 36 months.

1. Studies Published: 10/1/65 to 9/30/66

- a. Malaysia: Long-term Projections of the Supply of and Demand for Agricultural Products. The Contractor was the National Planning Association, Washington, D.C. The Director was Dr. D.S. Paauw. The findings of this study were reported in the previous reporting period. Highlights of the projections to 1975 were that gross national products were assumed to increase at 5 percent per year, population was expected to grow at 3 percent annually and consumption expenditures at an annual rate of  $4\frac{1}{2}$  percent (current values). Consumption of agricultural products was expected to increase significantly, with an increase in imports, especially of fruits, meat, dairy products, wheat and flour. Since the completion of the report, Singapore withdrew from Malaysia. As a result, the report's author concludes that "...there are strong reasons for believing that the separation of Singapore from Malaysia makes the economic prospects for the two areas less promising over the next decade than they appeared at the time this study was completed." A summary of this report and the implications of its findings for U.S. agricultural exports is being prepared.
- b. Saudi Arabia: Long-term Projections of Supply of and Demand for Agricultural Products. The Contractor was the Economic Research Institute, American University of Beirut, Lebanon. Edmond Y. Asfour was responsible for the overall direction of research and for writing the final report.

Major findings of the study were reported during the previous reporting period. These included a slowing down of the growth rate for GNP to about 5.5 percent per year by 1975, from very high levels. With projected per capita incomes increasing substantially, import needs of wheat and flour, rice, fresh fruits and sugar are projected by 1975.

- c. Venezuela: Long-term Forecasts of the Supply and Demand of Agricultural and Livestock Products in Venezuela. The Contractor was the Consejo de Bienestar Rural, Caracas. Dr. Ricardo Gondelles, Chief of Special Studies of the Consejo, was responsible for the study. The contract was entered into on April 2, 1962. Copies of the draft study report were received in November 1964, and final report issued

in March 1966. Projections through 1975 indicate average annual gains of 3.0 percent for population, 4.3 percent for per capita national income, and rapidly increasing requirements for food and other agricultural products. Although significant gains in agricultural production are expected, import requirements are projected at substantially higher levels for wheat, coarse grains, certain fats and oils, canned milk and cheese, beans, and seed potatoes. The contract group plans to continue studies in this area. A draft summary report is undergoing Branch review.

2. Studies Completed: 10/1/65 to 9/30/66

- a. France: Production and Uses of Selected Farm Products in France, a Projection, 1960 to 1975. The Contractor was the Centre de Recherches et de Documentation sur la Consommation (CREDOC) Paris, France; Director, G. Rottier. The final report was reviewed and edited by the Europe and Soviet Union Branch, forwarded to the Contractor for final approval, returned by the Contractor, and is being prepared for publication.

The study projected French GNP to increase 5 percent per year and per capita expenditure 4 percent between 1965 and 1975. French population is projected to increase from 46.6 million in 1962 to 51.2 million in 1970 and 53.8 million in 1975. The contribution of livestock to the value of total production will increase relative to crops as shifts in consumer demand result in higher livestock prices relative to crop prices. Net exports of livestock products, dedicuous fruit, and grains are expected to increase, while net imports of oilseeds, oil cake, and tobacco, will increase.

- b. India: The Effects of Economic Development Upon Consumer Demand for Agricultural Products. The study is being conducted by the National Council of Applied Economic Research, New Delhi. The Research Director is Dr. P.S. Lokanathan. The final report for this project is being published under the title "All India Consumer Expenditure Survey, Volumes I and II." Volume I, dealing with the objectives of the study and the basic methodology used in conducting the All-India Consumer Expenditure Survey, has been published.

The preliminary draft of Volume II of the report has been reviewed and resubmitted, with pertinent comments, to the Contractor. The report should be published by early 1967. The study reveals that families in developed areas are generally better educated, have higher incomes, experience a greater degree of upward movement in their income over time and spend less of their income on foodgrains.

Under the assumptions that (1) population of India will grow at an annual compound rate of 2.3 percent, reaching approximately 555 million in 1970/71 and (2) the growth in per capita real (national) income will be 2 percent in the last year of the Third Five Year Plan

(1965-66) and 2.6 percent per annum over the Fourth Plan period. Another section of the study indicates that the nationwide household demand for all cereals taken together will be about 87 million tons in 1970/71. The demand for all foodgrains (cereals and pulses) will approximate 100 million tons while that for edible oils will be about 2.4 million tons.

The demand for milk and milk products and tobacco and allied products are projected to reach a 1970/71 level of 37 and 0.4 million tons, respectively. The demand for cotton clothing is shown to be about 91 million metres.

- c. Mexico: Projections of Supply of and Demand for Agricultural Products in Mexico. Two groups working jointly were involved as Contractors in the agreement: The Mexican Ministry of Agriculture and the Banco de Mexico, S.A. Joint. Directors of the project were Sr. Ing. Emilio Alania Patino and Sr. Victor Urquidi, both of the Bank. A draft study report was received in November 1965. The study has been reviewed and sent to Israel for publication. Projections through 1975 indicate average annual gains of 3.6 percent for population and 2.3 percent for per capita national income. Individual projections indicate that crop and livestock output will increase at a rate slightly lower than that of aggregate demand for farm products between 1961 and 1975. The index of output is expected to fall short of demand by 3.3 percent in 1970 and 8.0 percent in 1975, compared to 1.1 percent in 1960, when the difference was met out of imports. Principal deficits in output are expected to be for vegetables, fruit, oilseeds, sorghum, chickpeas and barley. Surpluses are expected in wheat, rice, beans, and coffee. The study is the first comprehensive look at Mexican agriculture as a whole and changes in present Mexican agricultural policy are expected as a result of the study. Also, the study group is expected to continue work in this area. A summary of the study report is underway.
- d. Pakistan: Long-term Projections of the Supply of and Demand for Agricultural Products. The Contractor is the Social Sciences Research Center, Lahore. The Research Director is Muhammad Khalid Hayat Khan. The review draft of the final report was received July 1965 and final alterations to the manuscript were suggested to the Contractor during early 1966. The revised, final report has not been received. Steps are being taken to terminate this project by the end of calendar year 1966.

In the preliminary copy of the final report the GNP of Pakistan is projected to grow at the very high annual compound rate of 7.9 percent from 1965 to 1985. With an assumed population growth rate of 3.7 percent, GNP per capita will increase at the rate of 4.2 percent and rise from \$76 in 1965 to \$170 in 1985. The growth rate in the agricultural sector is projected to be only 3.9 percent which will necessitate an upward trend in the import of many food

commodities, especially rice, wheat, and dairy products. Exports are expected to increase for fish, cotton and jute. The report is considered to be 95 percent complete.

- e. Spain: Long-term Projections of the Supply and Demand for Agricultural Products in Spain. Contractor, Comision Nacional de Productividad Agricola, Madrid, Spain, Director Sr. Torres Martinez. Additional translations of the final report were received from the Contractor in January 1966. The report has been under review. A preliminary draft of the summary report on implications to U.S. trade is now under review.

The study projects Spain's GNP to more than double between 1960 and 1975. Population is expected to increase about 1 percent per year between 1960 and 1975. The structure of agriculture is expected to be substantially modified, with livestock, fruit, and vegetable production becoming more important. While surplus production is projected for some commodities such as vegetables, fruits, and cotton, large deficits are forecast for feedgrains, edible oils, livestock products, and tobacco.

- f. Turkey: Long-term Projections of the Supply of and Demand for Agricultural Products. The Contractor is Robert College of Istanbul, Turkey, Research Director, Dr. Edgar Z. Palmer. Review draft of the final report was received August 1966. Final alterations to the manuscript were being completed at the close of the reporting period. Publication is expected in 1967.

Turkey's production of cereals is projected to be significantly short of domestic requirements by 1975. Wheat import requirements by such time are placed at 1.4 million metric tons and feedgrains at 1.2 million metric tons. The cultivated area for cereal production is expected to remain nearly constant through 1975 and yields are not expected to increase in line with increases in demand.

### 3. Studies in Progress: Stage of Completion, 9/30/66

- a. Australia: Long-term Projections of the Supply of and Demand for Agricultural Products. The Contractor is Monash University, Clayton, Victoria, Australia. Director of the project is Mr. Fred H. Gruen. The contract period began May 6, 1964. Its terminal date was extended from April 30, 1966 to August 1, 1966. Portions of the final report are being reviewed. The report should be published during fiscal year 1967.
- b. Belgium: Long-term Projections of the Supply of and Demand for Agricultural Products; Contractor, Studiecentrum voor Economisch en Sociaal Onderzoek (SES0), Antwerp, Belgium, Director, Dr. P.H. Virenque. The final report was received in September 1966 and review was begun at the end of the current reporting period.

- c. Brazil: Long-term Projections of the Supply of and Demand for Agricultural Products. The contract is with the Getulio Vargas Foundation, Rio de Janeiro. The study is under the direction of Dr. Julian M. Chacel, Head of the Brazilian Institute of Economics of the Foundation. The contract was undertaken June 28, 1961. A preliminary draft report of study was submitted in March 1966. However, the report did not contain sufficient background data and the Contractor agreed to reorganize the report and supply the necessary data. The revised final report was expected to be completed by the end of September 1966, but has not been received.
- d. Chile: Long-term Projections of the Supply of and Demand for Agricultural Products. The Contractor is the Facultad de Ciencias Economicas y Sociales de la Universidad Catolica de Chile, Santiago. Rolf Luders of the Centro de Investigaciones Economica of the Facultad is now in charge of the study.

The contract period began May 9, 1962. The study is completed and is being translated into English by the Contractor.

- e. Colombia: Long-term Projections of the Supply of and Demand for Agricultural Products. The contract is with the Universidad de los Andes, Bogota. Dr. Eduardo Wiesner D., Dean of the Economics Department of the University is in charge. The contract period began November 28, 1960. The report was submitted in November 1964 but returned to the Contractor for extensive revisions. About 60 percent of the revisions have been completed.
- f. Denmark: Long-term Projections of the Supply of and Demand for Agricultural Products; Contractor, Institute of Economics, University of Aarhus, Aarhus, Denmark, Director, J.H. Getting. Under the direction of Professor Vibe-Pedersen, the study is scheduled for completion December 31, 1967.
- g. Hong Kong: Long-term Projections of the Supply of and Demand for Agricultural Products. The Contractor is the Chinese University, Kowloon, Hong Kong. The Project Director is Dr. Choh-Ming Li. The contract period began June 26, 1964. The terminal date has been extended from June 30, 1966 to January 31, 1967. Although the original project leader of this project has now moved into a new position, his replacement is expected to have the final report completed by the new terminal date. The report is about 85 percent complete.
- h. Netherlands: Long-term Projections of the supply of and Demand for Agricultural Products; Contractor, Landbouw-Economisch Institut, The Hague, Netherlands, Director A. Maris. The study, which began in June 1962, was extended to December 31, 1966. The Contractor has already forwarded completed sections of the study.

- i. Peru: Long-term Projections of the Supply of and Demand for Agricultural Products. The Contractor is the Universidad Agraria, Lima, Peru. Sr. Ing. Eduardo Watson C. is overall study Director. The contract period began December 1, 1962. The study is about two-thirds completed. As a result of the study, an annual publication of agricultural statistics has been instituted by the Peruvian Government which has completely revised basic statistical series of the country and makes such data readily available for the first time.
- ii. Republic of South Africa: Long-term Projections of the Supply of and Demand for Agricultural Products. The Contractor is Arthur D. Little, Inc., Cambridge, Massachusetts, Research Director, Maurice Johnson. The final report is due March 1967. The sections on population, GNP, elasticities, and various commodities have been completed.
- iii. South Korea: Analysis of the 1964 Country-wide Household Food Consumption Surveys Data for the Republic of Korea. The Contractor is Yonsei University, Seoul, Korea. Dr. Ki Hyuk Pak and Kee Chun Ha are the co-leaders for this study. The current terminal date is February 28, 1968. The first progress report has been received. An addendum to the first progress report was received from the Contractor upon our request for additional information. The combined reports presented a tabular framework for compiling and analyzing food consumption data and a review of currently published data pertinent to food consumption analyses.
- iv. West Germany: Long-term Development of Demand and Supply for Agricultural Products in the Federal Republic of Germany: Contractor, Institut für Wirtschaftsforschung, Munich, Germany, Director, Dr. Günter Zempel. The final report was received recently. The report is under review.
- v. United Arab Republic (Egypt): Long-term Projections of the Supply of and Demand for Agricultural Products. The contract was signed with the Ministry of Agriculture, United Arab Republic. Research is scheduled for completion by March 1967. Initial analyses of the GNP, population, elasticities, and productivity have been made.
- vi. United Kingdom: Updating and Extension of the Long-term Projection of the Supply of and Demand for Agricultural Products: Contractor, University of Oxford, Agricultural Research Institute, Director, G. H. Clark. The final report, scheduled to have been completed August 31, 1966, is expected to be received late in 1966.
7. Research Contracts Negotiated: 10/1/65 to 9/30/66
  - a. Argentina: Long-term Projections of the Supply of and Demand for Agricultural Products. The contract, for a period of 26 months, was

signed April 19, 1966 with the Instituto Nacional de Tecnologia Agropecuario (INTA), Buenos Aires. Dr. Sylian Rolando Otrera is the Director of the study.

- b. Central America: Long-term Projections of the Supply of and Demand for Agricultural Products for Central America (Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica, Panama, and the Territory of Belize). The contract is with the Battelle Memorial Institute, Columbus, Ohio. Dr. Odin Wilhelmy, Jr., Head of the Agricultural and Food Economics Division, Department of Economics and Information Research, is the study Director. The contract was signed November 19, 1965, for a period of 18 months.
- c. Iran: Determination of the feasibility of conducting a study making Long-term Projections of Supply of and Demand for Agricultural Products. The Contractor is Utah State University, Logan, Utah, Research Director, Dr. Allen LeBaron. The study was signed in June 1966. The report has been received and alterations to the manuscript were being completed at the close of the reporting period. The feasibility study will not be published.

The Contractor concluded that there are enough data and work materials readily available in Iran to make it feasible to conduct a full research study on the Long-Range Projections of Supply of and Demand for Agricultural Products in Iran.

- d. Nigeria: Long-term Projections of Supply and Demand for Agricultural Products. This study will be an updating revision and extension of an earlier study. The Contractor is the Department of Political Economy, University of Edinburgh, Scotland, Research Director, Ian G. Stewart. The study was initiated in June 1966, and is expected to extend through December 1967.

##### 5. Studies for Which Implications for U.S. Agriculture Have Been Analyzed

The Division makes summaries and evaluations of the supply and demand studies as they are completed. Such summaries include analyses and assessments of the competitive position of selected U.S. farm products in the countries studied and the probability of maintaining or increasing U.S. exports to them.

During the current reporting period, summaries have been published for Ghana and the West Indies. Summaries for Japan and Saudi Arabia are in the process of being published. For the Venezuela study, a draft is being reviewed and for Spain a first draft has been completed. Work is underway on summaries for France, Malaysia, Mexico and Pakistan. Below are highlights of the published summary reports.

- a. Ghana: It was estimated that Ghana will import at least 85 percent of its rice from the United States in 1970 and 1975, amounting to 29,000 and 35,000 tons, respectively. Ghana does not produce wheat but has been importing it primarily from Canada. Expected imports of U.S. wheat are placed at 19,000 tons in 1970 and 24,000 tons by 1975. Commercial imports of dry milk from the United States are projected at 300 tons and 500 tons in 1970 and 1975. Unmanufactured tobacco imports from the United States are projected at 1 million pounds in 1970 and 0.7 million pounds in 1975. Ghana's future import needs of meat are expected to be met primarily from neighboring West African countries.
- b. Saudi Arabia: The major U.S. agricultural export to Saudi Arabia has been rice and such exports are projected at 44,000 tons by 1970 and 58,000 tons by 1975. U.S. wheat exports to Saudi Arabia are projected to increase only slightly, from 78,000 tons in 1970 to 80,000 tons by 1975. Exports of fruits and preparations are expected to increase from approximately 2,700 tons to 4,500 tons from 1970 to 1975. The United States sells small quantities of meat and vegetables in Saudi Arabia. During the 1970 and 1975 period exports of vegetables are projected at 1,000 and 1,800 tons while meat exports are expected to increase from approximately 1,500 tons to 2,000 tons.
- c. West Indies Area: Projections to 1975 indicate that the former West Indies Federation and British Guiana are expected to remain a small but rapidly growing source of agricultural trade with the United States. Imports are expected to increase to \$228 million in 1975 compared with \$118 million in 1958, with wheat and dairy products the primary products.

#### D. Demand for Agricultural Exports of Less-Developed Countries

Work on the AID project is in the beginning stages. Data are being collected and processed for historical analyses and identification of major market areas by major commodity groups. An important byproduct of this study will be the development of historical series on trade, supply and disappearance. Considerable time is also being spent on developing an analytical framework for identifying and measuring historical relationships and for use in projecting demand to the 1980's.

#### PUBLICATIONS REPORTING RESULTS OF U.S.D.A. AND FOREIGN RESEARCH CONTRACTORS

Asfour, Edmond Y. et al. Saudi Arabia: Long-term Projections of Supply and Demand for Agricultural Products. Economic Research Institute, American University of Beirut, 180 pages, 1965.

Consejo de Bienestar Rural. Long-term Forecasts of Supply and Demand for Agricultural Products in Venezuela. U.S. Department of Agriculture, Economic Research Service, 300 pages, 1965.

- Crosson, Pierre R. Economic Growth in Malaysia. Center for Development Planning, National Planning Association, Washington, D.C., 188 pages, 1966.
- Davenport, Charles R. Summary and Evaluation of Jamaica, Trinidad and Tobago, Leeward Islands, Windward Islands, and British Guiana--Projected Levels of Demand, Supply, and Imports of Agricultural Products to 1975. U.S. Department of Agriculture, Foreign Regional Analysis Division, ERS-Foreign 148, 50 pages, 1966.
- Moe, Lyle E. Ghana: Supply and Demand Projections for Farm Products to 1975 with Implications for U.S. Exports. U.S. Department of Agriculture, Foreign Regional Analysis Division, FAER No. 30, 20 pages, 1966.
- National Council of Applied Economic Research. All India Consumer Expenditure Survey, Volume I. New Delhi, India, 213 pages, 1966.
- Walters, Harry E. Soviet Agricultural Output by 1970. Processed. U.S. Department of Agriculture, Foreign Regional Analysis Division, Economic Research Service, 62 pages, 1965.
- West, Quentin M. Foreign Supply and Demand Projections; Outlook for U.S. Agricultural Exports. Paper presented at the Annual Meeting of the American Farm Economics Association, College Park, Maryland, 39 pages, August, 1966.
- West, Quentin M. World Food Needs. Paper presented at Utah's Tenth Annual Agricultural and Industry Conference, Salt Lake City, Utah, 25 pages, February 1966.

## Line Project Check List\* -- Reporting Year October 1, 1965 to September 30, 1966

Work and Line Project Number	Work and Line Project Titles	Work Locations During Past Year	Line Project Inc. in	
			Summary of Progress (Yes-No)	Area and Subheading
FRA 1	:Long-range outlook for U.S. farm exports	:Washington, D.C.	: Yes	: Area 1
-1	:World food budget, by country and region	:Washington, D.C.	: Yes	:
-2	:Projection of exports leading U.S. farm : commodities	:Washington, D.C.	: Yes	:
-3	:Long-term projections of foreign supply : and demand for agricultural products by : country, region and for the world	:Washington, D.C.	: Yes	:
-4	:Long-term projections of foreign supply : and demand for agricultural products by : country in the Western Hemisphere	:Washington, D.C. :and visits to contrac- :tors in Western :Hemisphere	: : Yes	:
S8-FRA-1	:Long-term projections of supply for : selected agricultural products in Peru	:Lima, Peru	: Yes	:
FRA 1-5	:Long-term projections of foreign supply : and demand for agricultural products by : country in Western Europe	:Washington, D.C. :and visits to contrac- :tors in Western Europe	: : Yes	:
E4-FRA-1	:Belgium: Projections of the supply, demand: : for, and trade of agricultural products : in 1970 and 1975	:Antwerp, Belgium	: Yes	:
E7-FRA-1	:Long-term projections of supply, demand for, : and trade of agricultural products in : 1970, 1975, and 1980 in Denmark	:Aarhus, Denmark	: Yes	:
E29-FRA-1	:Updating of the projections of the supply : of, demand for, and trade of agricultural : products in 1970, 1975 and 1980 in the U.K.	:Oxford, England	: Yes	:
FRA 1-6	:Long-term projections of foreign supply and : demand for agricultural products by : country in Africa and the Middle East	:Washington, D.C. :and visits to contrac- :tors in Africa and the :Middle East	: : Yes	:
F4-FRA-1	:Long-term projections of supply and demand : for selected agricultural products in the : United Arab Republic	:Cairo, United Arab :Republic	: : Yes	:
F15-FRA-1	:Long-term projections of supply and demand : for selected agricultural products in the : Republic of South Africa	:Cambridge, Mass.	: Yes	:
A22-FRA-1	:Long-term projections of supply and demand : for selected agricultural products in : Turkey	:Istanbul, Turkey	: Yes	:
FRA 1-7	:Long-term projections of foreign supply and : demand for agricultural products by : country in the Far East and Oceania	:Washington, D.C. :and visits to contrac- :tors in the Far East :and Oceania	: : Yes	:
A25-FRA-1	:Long-term projections of supply and demand : for selected agricultural products in the : total area of the Crown Colony of Hong : Kong	:Kowloon, Hong Kong	: Yes	:
O1-FRA-1	:Long-term projections of supply of and de- : mand for selected agricultural products : in Australia	:Clayton, Victoria, :Australia	: : Yes	:
FRA 2	:Foreign competition and demand by country : and region	:Washington, D.C.	: Yes	: Area 2
-1	:Foreign competition and demand, Western : Hemisphere	:Washington, D.C.	: Yes	:
-2	:Foreign competition and demand, Western : Europe	:Washington, D.C.	: Yes	:
-3	:Foreign competition and demand, Eastern : Europe	:Washington, D.C.	: Yes	:
-4	:Foreign competition and demand, Africa and : Middle East	:Washington, D.C.	: Yes	:

## Line Project Check List\* -- Reporting Year October 1, 1965 to September 30, 1966

Work and Line Project Number	Work and Line Project Titles	Work Locations During Past Year	Line Project Inc. in Summary of Progress (Yes-No)	Area and Subheading
FRA 2				
FX1-FRA-1	:Effect of oilseed production potential in : Nigeria, Congo (Leopoldville), and : Senegal on United States exports to the : European Economic Community	: : :Edmonton, Alberta, :Canada	: : : : Yes	: : : : Area 2
FRA 2-5	:Foreign competition and demand, Far East	:Washington, D.C.	: Yes	:
-6	:World agricultural situation	:Washington, D.C.	: Yes	:
-7	:Agricultural policies of foreign countries	:Washington, D.C.	: Yes	:
FRA 3	:Quantitative evaluation of foreign produc- : tion, utilization, and trade in farm : products	: : :Washington, D.C.	: : : Yes	: : : Area 3
-1	:Food balances for foreign countries	:Washington, D.C.	: Yes	:
-2	:Improving statistical tables of trade in : agricultural products by foreign : countries	: : :Washington, D.C.	: : : Yes	: : :
-3	:Annual indices of agricultural production : in foreign countries	: :Washington, D.C.	: : Yes	: :

\*The Work and Line Project numbers have not been revised in accordance with the Division reorganization. Since the function of the Central Project File is under review, it was suggested that these projects not be revised at this time. Also because of this review project numbers have not been assigned to supply and demand studies of Argentina and Central America.

